**Exhibit C**
**Radio Operations Building Schedule of Deliverables and Requirements**
June 22, 2011

**Project Understanding**
The project consists of the design and construction administration of a new, fenced-in, single-story building meeting R-56 Electrical Standards for Radio Operations to house new Public Safety Microwave Communications Radio Equipment. The building is required to have HVAC with 100% redundancy and a back-up generator with sufficient capacity for all communications equipment and building systems. The current radio communications system will remain in place in the existing facility until the new equipment placed in service. The new building area will be approximately 2,500 SF, and include a 40' x 40' equipment bay, 300 SF workroom and unisex restroom. The project also includes extension of water and sewer service to the new building and upgrades to the existing communication tower's grounding system if needed.

## Basic Services

### *Concept Workshop*

- Conduct one (1) 3-hour workshop with attendance in person or telecommunication by all key design team members and client stakeholders with the following general agenda:
    - Confirm R56 standards.
    - Distribution of preliminary communication equipment list and specifications by the City.
    - Determine preliminary equipment layout, including space reserved for future equipment.
    - Review site sketch prepared by design team ahead of time, make necessary modifications in the meeting and confirm on the final site layout.
    - Review building floor plan prepared by design team ahead of time, make necessary modifications in the meeting and confirm on the final floor plan layout.
    - Discuss sustainability strategy and confirm on measures to be incorporated.
    - Review project schedule.
    - Issue Concept Design Workshop Report

### *Site Inventory and Evaluation*

- Land Surveying (Radio Operations Facility site)
    - Perform land survey to establish horizontal and vertical control tied to North Carolina State Plane Coordinate System to be used for topographic survey. Existing site control, if available, will be verified for comparison to North Carolina State Plane Coordinate System.
    - Perform detailed topographic survey within limits delineated on page 6 of this exhibit.
    - Obtain spot elevation shots on natural ground at a sufficient density to accurately generate one foot contours.
    - Recon and locate sufficient number of property corners to adequately orient topographic survey to parcel. In the absence of existing property corners, site area will be shown as it relates to the Durham County Geographical Information System (GIS) database.
    - Designate and horizontally locate underground utilities within the survey limits.
    - Locate existing physical features located within survey limits.

    - Locate impervious surfaces within survey limits.
    - Establish one (1) on-site benchmark for use as vertical reference.
    - Prepare topographical base mapping for design purposes at suitable scale to clearly represent topography of survey limits at one-foot contour intervals.
    - Tree survey to include only trees that can contribute to compliance with landscape requirements along site frontage on Camden Avenue.
    - Location and mapping of existing tower and building ground grid.
    - Work not expected to be needed for this project and therefore not included in land survey scope of work:
        - Survey, mapping, and written legal descriptions of the property boundary
        - Preparation of subdivision, recombination, easement or right of way dedication plat
        - Property mapping for recordation in the Durham County Register of Deeds
        - Off-site survey for mitigation of property or infrastructure improvements
        - Impervious area survey for the entire property parcel

- Conduct geotechnical investigation to determine subsoil conditions needed for site and building foundation design and to determine soil resistivity (Allowance).

- The following work is not anticipated for this project and therefore not included in scope of work:
    - Phase I environmental assessment
    - Environmental engineering
    - Flood studies and mapping
    - Determination of size, depth and pressure of existing underground utility lines except as needed to tie new utilities into existing lines.

***Preliminary Design – 50% Phase***

- Conduct exterior ground system study
- Prepare building and site drawings, based on layouts determined in the Concept Workshop, to approximately 50% level of completion, including:
    - Cable racking concept plan to coordinate with lighting and HVAC plans.
    - Determination of capacities required in building structural systems to support equipment and cabling systems**.**
    - Building interior grounding system concept.
    - Design concept for exterior ground ring system for proposed building to integrate with existing site ground system.
    - Preliminary design of Ice Bridge from tower to building.
    - Coordination of building design concepts with R-56 electrical requirements.
    - Determination of requirements for backup generator system.
    - Code summary
    - List of permits and approvals and estimated application fees.
    - Updated project schedule.
    - Preliminary estimate of probable construction cost in CSI 2004 standard format.
    - Abbreviated Basis of Design Report in sufficient detail to describe proposed building structure and site design.
    - Preliminary schedule for construction, including phasing if needed.

- Attend bi-weekly design meetings. Some participants, including IBI communications specialist, may attend remotely by telephone or web-meeting.
- Submit 50% design documents to City, attend a meeting, facilitated by City of Durham General Services Department, attended by all interested stakeholders and City reviewers to confirm that the design conforms to parameters previously agreed to, and authorizing design team to proceed to Final Design Phase. The design team will meet separately with State review agencies to confirm compliance with applicable regulations. Any review comments arising from these review meetings will be addressed in the Final Design Phase. The City will pay all design permit/review fees, if any.

  Project scope of work is based on the following assumptions, established in pre-proposal meetings with the City of Durham:
  - Site plan approval will follow the "Large Simplified" City of Durham process and will not require public meetings or presentations to City Council.
  - Wastewater conveyance to municipal system will be through a small grinder pump and small force main tying to existing manhole on Camden Avenue.
  - Water service tap will be made at Camden Avenue.
  - Water and wastewater service design will be provided only for the proposed radio building.
  - Existing driveway will remain as is with no improvements required.
  - Three to four new parking spaces, including van accessible space, are required near proposed building.
  - Fire truck turn around area is required near proposed building.
  - Design of fire line and hydrant is included as an alternate for use in the event City requires inclusion in project.
  - Topographic survey and design of approximately 2,600 LF of new sidewalk on Camden Avenue is included as an optional additional service for use in the event the City does not grant the waiver and requires the sidewalk to be included in project.
  - Site plans already prepared for other projects will be used to document impervious area on the overall 103 acre property, of which the radio operations facility is a part, in connection with showing compliance with impervious limitations and other required storm drainage calculations.
  - Flood information for proposed site plan will be taken from existing FIRM maps.
  - Zoning/Planning requirements will be listed on schematic drawing cover sheet.

  The following work is not anticipated to be needed for this project and therefore not included in scope of work:
  - Site environmental assessment or contamination remediation
  - Flood Study and Flood Insurance Rate Mapping
  - Wetlands delineation
  - Recombination plat for subdivision of proposed facility from larger City-owned property parcel
  - Re-zoning
  - Master utility plan
  - Traffic Study
  - Entrance roadway design
  - Driveway application
  - Turn lanes or roadway widening
  - Other off-site improvements

***Final Design Phase***

- Preparation of final construction drawings, specifications, and related documents, to include:
    - Building systems and details for compliance with R-56 electrical requirements.
    - Accommodation of communications equipment, cabling, and racking to be designed by equipment vendors under separate contract with the City.
    - Coordination with electric utility company for service to proposed building.
    - Backup generator system.
    - Building exterior ground ring system (Optional Additional Service, if required)
    - Ice Bridge from tower to building.
    - Code summary.
    - Alternate bid items as needed to provide bid flexibility for budget compliance.
    - Updated list of permits and approvals and estimated application fees.
    - Updated project schedule.
    - Updated estimate of probable construction cost in CSI 2004 standard format.
- Attend bi-weekly design meetings. Some participants, including IBI communications specialist, may attend remotely by telephone or web-meeting.
- Submit Final Design Documents to City and State review agencies as applicable, and respond to review comments. The City will pay all design permit/review fees if any.

***Bidding and Negotiation Support***

- Prepare and issue bid documents, in hard copy and electronically as directed by the City, to interested contractors.
- Provide up to five (5) hard copies of bid documents for City use.
- Issue addenda as required.
- Attend bid opening, assist City with evaluation of bids and make recommendation of contract award.

***Construction Administration***

- Review contractor submittals and payment applications. IBI Group intends to require contractor to make submittals electronically rather than hard copy format.
- Respond to contractor RFIs and issue clarifications as required.
- Prepare change orders if necessary.
- Make site visits bi-weekly, and attend contractor's monthly progress meeting during one of those visits. Issue site visit report and meeting minutes.
- Provide earthwork inspection and testing services
- Provide concrete and structural steel inspection and testing services
- Make one pre-final inspection with punchlist and one final inspection.

***Post Construction and Warranty Support***

Prepare Record Drawings in AutoCad and pdf formats, based on mark ups.

- provided by the contractor
- Conduct one warranty inspection approximately 11 months after project Substantial Completion.

## Optional Additional Services

- Design of upgrades to the existing tower ground grid if needed.
- Design of fire line extension and hydrant at Radio Operations Building site if required by the City.
- Land survey and design of approximately 2,600 LF of new sidewalks on Camden Avenue if required by the City.

## General Exclusions

The following are excluded from the proposed scope of work:

- All design services related to specification and procurement of communications equipment, cabling, cable racking and other systems to be purchased under separate contract by the City.
- All design and testing services related to interim modifications or subsequent demolition of existing communications buildings.
- All design and testing services related to modifications or upgrades to existing communications tower other than upgrades to the ground ring if needed and construction of a new ice bridge.
- Due to small project size, use of BIM software is excluded.
- Due to small project size, use of City's Primavera tracking and communication system is excluded.
- Cost of reproducing drawings, specifications and project manual for issue to bidders.
- Cost of application or permit fees.